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In re Application of
Breed et al.
Application Number
08/239,978
Filed
5/9/94
Paper No. 21

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United States Patent Application Publication No. _____, page, _____ line _____.

United States Patent Number 5,901,978, column _____, line, _____ or

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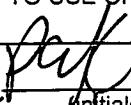
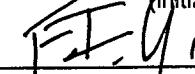
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US005901978A

United States Patent

[19]

Breed et al.**Patent Number: 5,901,978****Date of Patent: *May 11, 1999****[54] METHOD AND APPARATUS FOR
DETECTING THE PRESENCE OF A CHILD
SEAT****[75] Inventors:** **David S. Breed**, Boonton Township, Morris County, N.J.; **Wilbur E. Duvall**, Kimberling City, Mo.; **Wendell C. Johnson**, San Diego, Calif.**[73] Assignee:** **Automotive Technologies International, Inc.**, Denville, N.J.**[*] Notice:** This patent is subject to a terminal disclaimer.**[21] Appl. No.:** 09/084,641**[22] Filed:** May 26, 1998**Related U.S. Application Data****[63]** Continuation-in-part of application No. 09/047,704, Mar. 25, 1998, which is a continuation-in-part of application No. 08/640,068, Apr. 30, 1996, Pat. No. 5,829,782, which is a continuation of application No. 08/239,978, May 9, 1994, abandoned.**[51] Int. Cl. 6** B60R 21/32**[52] U.S. Cl.** 280/735; 180/272; 342/72;
701/45**[58] Field of Search** 280/735, 734;
180/272; 342/72, 70; 701/45, 49**[56] References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—Peter C. English
Attorney, Agent, or Firm—Samuel Shipkovitz**[57] ABSTRACT**

Method and system for detecting the presence of the child seat on a seat in which information about contents of the seat is obtained and a signal is generated based on any contents of the seat, a different signal being generated for different contents of the seat when such contents are present on the seat. The signal is analyzed in order to determine whether the contents of the seat include a child seat, and in a preferred embodiment, a child seat in a rear-facing orientation. Another system within the vehicle may be affected or controlled based on the determination of whether a child seat is present on the seat. The analysis of the signal is preferably by pattern recognition techniques that can recognize and thus identify the contents of the seat.

21 Claims, 22 Drawing Sheets